

Revisiting the 2003 Mercury Strategy for the Bay-Delta Ecosystem  
January 26 – 28, 2016/June 2<sup>nd</sup>, 2016  
Cal EPA Building, Klamath Room (2<sup>nd</sup> floor),  
1001 I Street, Sacramento, CA

Workshop Purpose

To create a shared understanding of the current knowledge of mercury science among scientists and managers invested in the San Francisco Bay-Delta system. The workshop will assess the progress made toward achieving the recommendations outlined in the 2003 Mercury Strategy and provide an update of recent and ongoing scientific studies in the region. The information presented will address challenges associated with mercury contamination in the Bay-Delta ecosystem including the identification of critical uncertainties and associated priorities for research, monitoring, and evaluation. The resulting workshop summary will inform managers towards the goal of identifying and selecting management actions to address mercury pollution.

Workshop Format

The workshop will consist of three (3) themed workshops in January consisting of technical presentations during the morning session and a facilitated discussion during the afternoon session. A synthesis workshop will be held in June that will consist of summary presentations of the technical workshops during the morning session and a facilitated discussion of the synthesis during the afternoon session. There will also be posters hung in the venue throughout the workshop series to promote discussion among workshop participants.

January 26, 2016: Sources  
January 27, 2016: Biogeochemistry  
January 28, 2016: Bioaccumulation  
June 2, 2016: Synthesis & Revisiting the Strategy

Products

- 1) Updated publication in the San Francisco Estuary and Watershed Science online journal addressing the mercury strategy for the SF Bay-Delta System
- 2) Presentation at the Bay-Delta Science Conference (November 15-17, 2016)

Independent Science Panel

*David Krabbenhoft, Ph.D., USGS*

*Cynthia Gilmour, Ph.D., Smithsonian Environmental Research Center*

*Karen Kidd, Ph.D., University of Brunswick*

For more information, please contact:

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## Workshop 1: Sources, January 26, 2016

### WORKSHOP LEAD

Jacob Fleck, USGS California Water Science Center

### Morning Session

8:30– 9:00 Workshop sign-in and poster viewing\* (coffee served)

9:00 -9:30 **Workshop introduction: Revisiting the 2003 Strategy and conceptual models**  
Jacob Fleck (USGS California Water Science Center)

9:30 – 10:00 **Mercury remediation in the San Francisco Bay-Delta Watershed**  
Carrie Austin (San Francisco Regional Water Quality Control Board)

10:00 – 10:30 **Concentrations and loads of mercury and methylmercury from urban tributaries of San Francisco Bay, California**  
Lester McKee, Don Yee, Alicia Gilbreth (San Francisco Estuary Institute)

10:30 – 11:00 **Mercury transport in tidal systems: measuring loads and processes**  
Brian Bergamaschi (USGS California Water Science Center)

11:00 – 11:30 **Comparison of Mercury Mass Loading in Streams to Atmospheric Deposition in Watersheds in the Western US: Evidence for Non-Atmospheric Mercury Sources**  
Joe Domagalski (USGS California Water Science Center)

11:30 – 12:00 **The use of the natural abundance of stable Hg isotopes to determine the relative contribution of Hg sources to sediment and biota in the San Francisco Bay-Delta system.**  
Joel Blum (University of Michigan)

12:00 – 12:30 **Status of our understanding of mercury in the San Francisco Bay-Delta from the Mercury Conceptual Model perspective: Experiences of the DWR open water effort**  
Carol DiGiorgio (Department of Water Resources) and Reed Harris (Reed Harris Environmental Ltd.)

12:30-1:30 LUNCH and POSTER SESSION

### Afternoon Session

1:30-4:30 Facilitated discussion to identify information gaps and suggestions for potential improvements in mercury management in the Bay-Delta ecosystem (Juliana Birkhoff, facilitator)

\* although there will not be a formal poster session, posters will be available for viewing throughout the duration of the workshop along the back of the room.

## WORKSHOP 2: Biogeochemistry, January 27, 2016

### WORKSHOP LEAD

Lisamarie Windham-Myers (USGS, National Research Program, Menlo Park)

### Morning Session

8:30– 9:00 Workshop sign-in and poster viewing\* (coffee served)

9:00 - 9:30 **Workshop introduction**  
Lisamarie Windham-Myers

9:30 – 10:00 **Controls on mercury methylation**  
Mark Marvin-DiPasquale (USGS National Research Program, Menlo Park, CA)

10:00 – 10:30 **Role of dissolved organic matter in mercury cycling**  
George Aiken (USGS National Research Program Boulder, CO)

10:30 – 11:00 **Overview of mercury cycling in rice agriculture**  
Jacob Fleck (USGS California Water Science Center)

11:00 – 11:30 **Yolo polishing ponds and mesocosms**  
Wes Heim (Moss Landing Marine Laboratory)

11:30 – 12:00 **Mercury control study: Coagulation techniques**  
Tamara Kraus (USGS California Water Science Center)

12:00 – 12:30 **Overview of preliminary control studies in the Delta MeHg TMDL effort**  
Stephen McCord (McCord Environmental)

12:30 – 1:30pm LUNCH and POSTER SESSION

### Afternoon Session

1:30-4:30 Facilitated discussion to identify information gaps and suggestions for potential improvements in mercury management in the Bay-Delta ecosystem (Juliana Birkhoff, facilitator)

\* although there will not be a formal poster session, posters will be available for viewing throughout the duration of the workshop along the back of the room.

## WORKSHOP 3: Bioaccumulation, January 28, 2016

### WORKSHOP LEADS

Josh Ackerman (USGS Western Ecological Research Center), Collin Eagles-Smith (USGS, Forest and Rangeland Ecosystem Science Center)

### Morning Session

8:30– 9:00 Workshop sign-in and poster viewing\* (coffee served)

9:00 – 9:30 **Linking Biogeochemical Parameters to Biological Mercury Exposure**  
Collin Eagles-Smith (USGS, FRESC)

9:30 – 10:00 **Overview of Mercury Risk to Wildlife and Factors Influencing Risk**  
Josh Ackerman (USGS, WERC)

10:00 – 10:30 **Mercury in Base of Food Web and Biomagnification**  
Robin Stewart (USGS National Research Program)

10:30 – 11:00 **Spatial and Temporal Trends in Fish Mercury**  
Darell Slotton (UC Davis)

11:00 – 11:30 **How the Regional Monitoring Program Integrates Mercury Science into Monitoring**  
Jay Davis (San Francisco Estuary Institute)

11:30 – 12:00 **Integrating Mercury Science into Regulation**  
Janis Cooke (Central Valley Regional Water Quality Control Board)

12:00 – 1:30 LUNCH and POSTER SESSION

### Afternoon Session

1:30-4:30 Facilitated discussion to identify information gaps and suggestions for potential improvements in mercury management in the Bay-Delta ecosystem (Juliana Birkhoff, facilitator)

\* although there will not be a formal poster session, posters will be available for viewing throughout the duration of the workshop along the back of the room.

## WORKSHOP 4: Synthesis, June 2<sup>nd</sup>, 2016

### Morning Session

9:00-12:30 Presentations of findings from each workshop in January

Jacob Fleck

*Sources workshop synthesis presentation*

Lisamarie Windham-Myers

*Biogeochemistry workshop synthesis presentation*

Josh Ackerman & Collin Eagles-Smith

*Bioaccumulation workshop synthesis presentation*

David Krabbenhoft, Cynthia Gilmour, Karen Kidd

*Independent Science Panel summary and comments*

12:30-1:30pm

LUNCH

### Afternoon Session

1:30-4:30 Assembling the pieces – a final Synthesis: Discussion of scientific integration across workshops, priorities, and next steps (facilitator, Juliana Birkhoff)